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Faith-Based Ecological Education: Integrating Religious Values and Community Servicethrough Ficus Conservation in Yogyakarta

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Abstract: The global ecological crisis demands educational approaches that are more contextual, participatory, and rooted in local culture. This study develops a model of faith-based ecological education through collaboration between university students and local communities in three rural villages of Yogyakarta: Randugunting (Kalasan), Jetak-Mredo (Sewon), and Tegalrejo (Moyudan). Using a Community-Based Research (CBR) approach and the Asset-Based Community Development (ABCD) framework, the study emphasizes the mobilization of local assets—mosques, Ramadan traditions, arts, and Ficus plants—as instruments of ecological education. Data were collected through participatory observation, semi-structured interviews, and activity documentation, and were analyzed using thematic analysis. The findings highlight three key results. First, Qur'anic values functioned as a catalyst for enhancing community acceptance of environmental conservation, particularly through Ramadan TPA activities and mosque-based discussions. Second, Ficus-based food and art innovations—such as herbal tea, urap, roulade, ecoprint, bonsai, and calligraphy—demonstrated the potential of community-based entrepreneurship to support food security and local economic resilience. Third, mosques served as anchor institutions integrating faith, knowledge, and community empowerment across generations. The study concludes that faith-based ecological education not only strengthens environmental conservation but also fosters ecological literacy, stimulates creative economy initiatives, and revitalizes the social functions of mosques. These findings contribute conceptually to the literature on faith-based ecology and offer a practical model for the development of just and sustainable ecological education.

Keywords: community-based research, asset-based community development, Ficus, mosque, faith-based ecological education.

Introduction

The global ecological crisis has become one of the greatest challenges of the twenty-first century. The IPCC (2023) report highlights that environmental degradation, declining water quality, and biodiversity loss exacerbate social vulnerability, particularly in tropical countries. Indonesia faces serious threats in the form of water scarcity, deforestation, and ecosystem degradation, all of which directly affect the sustainability of rural livelihoods (Setiawan, 2022; Lowy Institute, 2021). These conditions underscore the urgency of ecological education that is not limited to knowledge transfer but is also rooted in local culture and spirituality in order to be more widely accepted by communities.

Various models of environmental education have been developed, yet most remain top-down and insufficiently engage social–religious contexts (Sterling, 2010). In Indonesia, where the majority of the population is Muslim, religious dimensions can serve as an important entry point. Islam emphasizes the balance of the cosmos and humanity's responsibility as stewards (khalifah) of the earth (Q.S. Al-Anbiya': 30; Ar-Rum: 41). The eco-theology

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literature highlights the potential of religion to shape ecological consciousness and mobilize collective action (Nasr, 1968; Deane-Drummond, 2008; Khalid, 2021). Nevertheless, there remains a paucity of empirical studies examining how Qur'anic values are internalized within community-based ecological education programs.

This study focuses on Ficus, a genus in the Moraceae family comprising more than 800 species worldwide (Corner, 1985; Shanahan, So, Compton, & Corlett, 2001). In Islamic tradition, Ficus holds a special position, as mentioned in the Qur'an (Q.S. At-Tin: 1). In Indonesia, endemic species such as Ficus racemosa (loa), F. hispida, F. variegata, and F. septica are abundant in Java and provide significant ecological benefits. The roots of the loa tree (F. racemosa) help conserve water in river ecosystems, while its fruits and leaves are utilized in food and traditional medicine. The combination of ecological, cultural, and religious significance makes Ficus a strategic object for faith-based ecological education.

To explore these dynamics, the study employs the Community-Based Research (CBR) approach and the Asset-Based Community Development (ABCD) framework. CBR emphasizes equitable collaboration between researchers and communities in identifying problems, designing solutions, and reflecting on outcomes (Chupp & Joseph, 2010). Meanwhile, ABCD focuses on mobilizing local assets such as mosques, Ramadan traditions, arts, and culinary knowledge as primary resources for development (Kretzmann & McKnight, 1993; Mathie & Cunningham, 2003). The integration of CBR and ABCD provides an analytical framework that allows research not only to generate knowledge but also to strengthen community capacity.

Empirical studies in Indonesia that demonstrate how Qur'anic values, local ecological assets, and religious institutions are integrated within community development frameworks remain limited. This research aims to analyze three case studies in Kalasan, Moyudan, and Sewon, Yogyakarta, with a focus on how Ficus and mosques function as local assets in faith-based ecological education. Accordingly, this study not only documents community engagement practices but also offers conceptual contributions to the literature on faith-based ecology and community development.

Materials and Methods

This study employed a qualitative approach within a Community-Based Research (CBR) framework. The approach is aligned with the collaborative and action-oriented character of the study, in which community members act not merely as subjects but as partners. As the conceptual lens, we adopted Asset-Based Community Development (ABCD), which focuses on mobilizing local assets—such as mosques, Ramadan traditions, artistic and culinary know-how, and the ecological potential of Ficus—to strengthen community capacity for faith-based ecological education (Kretzmann & McKnight, 1993; Mathie & Cunningham, 2003). In combination, CBR and ABCD were designed not only to generate academic analysis but also to support community empowerment.

Sites and Participants.

Research was conducted in three hamlets in the Special Region of Yogyakarta:

(1) Randugunting, Kalasan – focused on riverbank conservation and Ficus education;

(2) Jetak-Mredo, Sewon – focused on Ficus-based food development and the creative economy; and

(3) Tegalrejo, Moyudan – focused on arts, Qur'anic literacy, and economic empowerment through Ficus.

Participants comprised 33 students from UIN Sunan Kalijaga, religious leaders, mosque committees, women's groups (PKK), village youth, and children attending Qur'anic learning sessions (TPA), totaling approximately 200 participants during Ramadan.

Data Collection.

Data were gathered through three main techniques:

1. Participant observation during ficus hunting, seedling activities, food–arts workshops, and Ramadan-based education in mosques.
2. Semi-structured interviews with religious leaders, youth, and PKK members to explore perceptions of faith-based conservation.
3. Documentation, including KKN reports, field notes, and visual materials (photos and videos).

Data Analysis.

Data were analyzed using thematic analysis (Braun & Clarke, 2006) in three stages: coding,

categorization, and theme development. Excerpts from observations, interviews, and documentation were first open-coded to capture basic meanings. Codes were then clustered into broader categories such as "religious framing," "ecologically based economic innovation," and "religious institutions as development hubs." From these, cross-site themes were derived: (a) integration of Qur'anic values in ecological education, (b) Ficus-based culinary and artistic innovation, and (c) the mosque's role as a center of community development. The analysis proceeded iteratively, comparing data across the three locations to identify common patterns and contextual variation.

Results and Discussion

Thematic analysis of observational, interview, and documentation data from Kalasan, Moyudan, and Sewon yielded three major themes: (1) the integration of Qur'anic values into ecological education, (2) culinary and artistic innovations based on Ficus, and (3) the role of mosques as centers of community development. Together, these themes highlight both overarching patterns and local variations, linking faith, ecology, and community development.

Theme 1. Integration of Qur'anic Values into Ecological Education

The primary finding indicates that religious framing effectively increased community participation in ecological education. In Kalasan, verses from Al-Anbiya' (30) on water and Ar-Rum (41) on environmental degradation were used to frame discussions on water conservation. These verses were recited at Al-Huda Mosque during Ramadan Qur'anic learning sessions (TPA). Children not only engaged in recitation but also watched a short film about Ficus and answered simple quizzes. Each afternoon, 50–100 children participated. The contextualization of Qur'anic narratives in ecological terms was expected to help children connect faith with practical action.

In Moyudan, Qur'anic integration was carried out through art. Children in the TPA created Ficus-leaf collages and environmentally themed calligraphy after studying tajwid. This activity combined creativity with Qur'anic values, showing that art can serve as a pedagogical tool for internalizing ecological messages.

In Sewon, the halal–thayyib principle was practiced in discussions on Ficus-based foods. Women's groups (PKK) participating in herbal tea and Ficus roulade workshops connected healthy consumption with Islamic teachings. This finding underscores that religiosity does not stop at awareness but extends into everyday practice.

Figure 1. Roulade & Tea from Ficus racemosa.

Cross-site findings reinforce the eco-theology literature. As argued by Nasr (1968) and Izzi Dien (2000), the ecological crisis can be understood as a spiritual crisis, and solutions must also be grounded in spirituality. Within the CBR framework, residents were not merely the recipients of outreach but active agents who interpreted and practiced Qur'anic teachings. From the perspective of ABCD, mosques and Ramadan traditions functioned as spiritual assets mobilized for ecological education.

Theme 2. Culinary and Artistic Innovations Based on Ficus

The second theme demonstrates that livelihood diversification became an adaptive strategy when local assets were creatively mobilized.

In Kalasan, students and PKK women developed herbal tea from Ficus septica (awar-awar). Leaves were collected together, dried using a simple oven, packaged, and shared, with around 20 residents tasting the product. This activity illustrates the redefinition of a wild plant into a functional food source and a potential avenue for creative economy.

In Moyudan, urap loa (Ficus racemosa) was reintroduced as a local food. The workshop was attended by about 30 PKK members. After tasting the dish, one participant remarked, "We used to

think the loa tree was only for shade, but it turns out it can be eaten." This shows that traditional culinary knowledge can be enriched as a source of nutrition as well as community identity.

In Sewon, product diversification was more extensive, including herbal tea, Ficus roulade, and leaf-based ecoprint. The ecoprint workshop, attended by 20 women and youth, produced naturally patterned fabrics. This innovation demonstrates that ecology can be transformed into artistic expression as well as cross-generational creative economic opportunities.

Figure 2. Ecoprinting workshop

Cross-site analysis reveals that Ficus-based innovation represents a form of community entrepreneurship. These culinary and artistic products are not simply training outputs but real practices of livelihood diversification, as described by Ellis (2000). Within the ABCD framework, Ficus is perceived not only as an ecological asset but also as an economic and cultural one. Through CBR, innovation emerged from community–student collaboration, rooted in the actual needs of the community.

Theme 3. The Role of Mosques as Centers of Community Development

The third theme confirms that mosques functioned as anchor institutions linking faith, ecology, and community development.

In Kalasan, Al-Huda Mosque became a hub of ecological education during Ramadan. Around 50–100 children joined daily TPA sessions that incorporated educational films, coloring competitions, and Ficus grafting practice. Mosque youth served as facilitators, demonstrating that the mosque could act as an intergenerational space connecting children, youth, and religious leaders.

In Moyudan, Ukhuwah Islamiyah Mosque became a collaborative space for art and Qur'anic literacy. Mosque youth, together with students, facilitated environmentally themed artwork for children. This activity highlights the mosque's role as a social hub that strengthens intergenerational community cohesion.

In Sewon, the mosque was used as a venue for food workshops and community discussions on health and the environment. This underscores that mosques can function as public deliberation spaces, not solely places of worship.

Figure 3. Artistic workshop using Ficus leaf.

From the CBR perspective, mosques acted as collective participation spaces providing moral legitimacy and encouraging active citizen engagement. In the ABCD framework, mosques were positioned as socio-spiritual assets capable of mobilizing local resources. These findings are consistent with the faith-based development literature (Clarke, 2008; Azcárate, 2021), which emphasizes the role of religious institutions as agents of social and ecological transformation.

Discussion

The three overarching themes—religious framing, livelihood diversification through Ficus innovation, and the mosque as an anchor institution—demonstrate a consistent pattern of integrating faith and ecology, albeit with local variations. Kalasan emphasized issues of water conservation, Moyudan highlighted arts and Qur'anic literacy, while Sewon displayed food and artistic diversification. This affirms that CBR and ABCD can serve as practical methods for bridging faith, ecology, and community development. CBR ensures community involvement as co-researchers, while ABCD explains how local assets are mobilized into collective strength.

This study generated three key findings that connect ecology, community, and faith. First, within the framework of eco-theology, the findings show

that the Qur'an can be practiced as a foundation for conservation. This supports the view of Nasr (1968) and Izzi Dien (2000) that the ecological crisis is essentially a spiritual crisis, and aligns with Deane-Drummond (2008), who emphasized religion as a basis for ecological ethics. Second, within the framework of sustainable livelihoods, Ficus innovation demonstrated livelihood diversification that strengthens rural economic resilience (Scoones, 1998; Ellis, 2000). Ficus-based food and art products not only contribute to household income but also enrich local cultural identity. Third, within the domain of faith-based development, mosques were proven to act as anchor institutions capable of facilitating intergenerational education, fostering social solidarity, and promoting ecological action. This resonates with Clarke (2008) and Azcárate (2021), who highlight the role of religious institutions in advancing sustainable development.

In practical terms, this study recommends utilizing mosques as centers of ecological education in other rural contexts, leveraging religious moments such as Ramadan as entry points. Ficus-based products can be further developed as the foundation for community entrepreneurship that supports food security and household economies. From an academic perspective, this study expands the literature on faith-based ecology by presenting an empirical model from the Indonesian context. The model underscores that the integration of eco-theology, livelihood sustainability, and faith-based development can be realized through CBR and ABCD approaches. Thus, faith-based community engagement not only provides practical benefits but also contributes conceptually to academic discourse.

Conclusions

This study demonstrates that the Community-Based Research (CBR) approach, combined with the Asset-Based Community Development (ABCD) framework, is effective in integrating religious values, ecology, and community empowerment. Findings from the three locations—Kalasan, Moyudan, and Sewon—confirm that local assets such as mosques, Ramadan traditions, culinary knowledge, and the arts can be mobilized for faith-based ecological education.

Three major patterns emerged from this research. First, Qur'anic values function as catalysts in ecological education. Religious framing enhanced community acceptance of environmental conservation, whether through verses on water and environmental degradation or through the principle of halal–thayyib in food practices. Second, culinary and product innovations based on Ficus demonstrated how local plants, once considered wild, can be transformed into healthy foods, herbal products, and artistic crafts with economic value. This opens opportunities for community-based entrepreneurship that supports food security and local economic resilience. Third, mosques play a pivotal role as centers of community development, serving as intergenerational spaces that bring together children, youth, women, and religious leaders in processes of faith-based ecological learning.

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